

MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI OIL AND GAS COUNCIL

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

☒ APPLICATION TO DRILL ☐ DEEPEN ☐ PLUG BACK ☒ FOR AN OIL WELL ☒ OR GAS WELL

NAME OF COMPANY OR OPERATOR PENSE BROTHERS DRILLING CO., INC. DATE 12/23/92
ADDRESS 800 NEWBERRY STREET CITY FREDERICKTOWN, MO STATE MO ZIP CODE 63645
Box 551

DESCRIPTION OF WELL AND LEASE

NAME OF LEASE J. SMITH WELL NUMBER #3 ELEVATION (GROUND) 990 (TOP)

WELL LOCATION (GIVE FOOTAGE FROM SECTION LINE) 235' ± FT. FROM (S) SECTION LINE 2403' ± FEET FROM (W) SECTION LINE

WELL LOCATION SECTION TOWNSHIP RANGE COUNTY
SE/4 SW/4 22 44 N 33 W CASS

NEAREST DISTANCE FROM PROPOSED LOCATION TO PROPERTY OR LEASE LINE 235 FEET

DISTANCE FROM PROPOSED LOCATION TO NEAREST DRILLING, COMPLETED OR APPLIED — FOR WELL ON THE SAME LEASE 1874' FEET

PROPOSED DEPTH 1200' DRILLING CONTRACTOR, NAME AND ADDRESS PENSE BROS. DRG. CO., INC. ROTARY OR CABLE TOOLS ROTARY (AIR) APPROX. DATE WORK WILL START ON PERMIT
Box 551, FREDERICKTOWN, MO 63645
NUMBER OF ACRES IN LEASE 260 NUMBER OF WELLS ON LEASE, INCLUDING THIS WELL, COMPLETED IN OR DRILLING TO THIS RESERVOIR 3
NUMBER OF ABANDONED WELLS ON LEASE 1

IF LEASE PURCHASED WITH ONE OR MORE WELLS DRILLED, FROM WHOM PURCHASED?
NAME N/A NO. OF WELLS: PRODUCING _____
ADDRESS _____ INJECTION _____
INACTIVE 1
ABANDONED 1

STATUS OF BOND ☐ SINGLE WELL AMOUNT \$ _____ ☒ BLANKET BOND AMOUNT \$20,000⁰⁰ ☒ ON FILE ☐ ATTACHED

REMARKS: (IF THIS IS AN APPLICATION TO DEEPEN OR PLUG BACK, BRIEFLY DESCRIBE WORK TO BE DONE, GIVING PRESENT PRODUCING ZONE AND EXPECTED NEW PRODUCING ZONE; USE BACK OF FORM IF NEEDED.)
N/A

PROPOSED CASING PROGRAM

AMOUNT	SIZE	WT/FT	CEM.
<u>80'</u>	<u>7"</u>	<u>19 LB</u>	<u>TD SURF</u>
<u>70 TO SURF</u>	<u>4 1/2"</u>	<u>10 1/2 LB</u>	<u>TD SURF.</u>

APPROVED CASING — TO BE FILLED IN BY STATE GEOLOGIST

AMOUNT	SIZE	WT/FT	CEM.

I, the undersigned, state that I am the ASST. V.P. of the Pense Bros Drg Co., Inc. (company), and that I am authorized by said company to make this report, and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct, and complete to the best of my knowledge.

SIGNATURE B. E. BLAINCETT DATE 12/23/92
B. E. BLAINCETT, ASST. V.P.

PERMIT NUMBER #20557 ☒ DRILLER'S LOG REQUIRED ☒ E-LOGS REQUIRED IF RUN
APPROVAL DATE 12/24/92 ☒ CORE ANALYSIS REQUIRED IF RUN ☒ DRILL STEM TEST INFO. REQUIRED IF RUN
APPROVED BY [Signature] C9K DEC 24 1992
☐ SAMPLES REQUIRED
☐ SAMPLES NOT REQUIRED
☐ WATER SAMPLES REQUIRED AT _____

NOTE ► THIS PERMIT NOT TRANSFERABLE TO ANY OTHER PERSON OR TO ANY OTHER LOCATION. MO Oil & Gas Council

APPROVAL OF THIS PERMIT BY THE OIL AND GAS COUNCIL DOES NOT CONSTITUTE ENDORSEMENT OF THE GEOLOGIC MERITS OF THE PROPOSED WELL NOR ENDORSEMENT OF THE QUALIFICATIONS OF THE PERMITTEE.

I _____ of the _____ Company confirm that an approved drilling permit has been obtained by the owner of this well. Council approval of this permit will be shown on this form by presence of a permit number and signature of authorized council representative.

DRILLER'S SIGNATURE _____ DATE _____



MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI OIL AND GAS COUNCIL

INJECTION WELL PERMIT APPLICATION
(TO DRILL, DEEPEN, PLUG BACK, OR CONVERT AN EXISTING WELL)

NOTE ▶ Permit approval for drilling only, not injection. Approval or denial for injection determined after Mechanical Integrity Test results reviewed and official notification given.

☐ APPLICATION TO DRILL ☐ DEEPEN ☐ PLUG BACK ☒ CONVERSION

NAME OF COMPANY OR OPERATOR

PENSE BROTHERS DRILLING CO., INC.

DATE

7/22/93

ADDRESS *600 NEWBERRY ST.
P.O. BOX 551*

CITY

FREDERICKTOWN

STATE

MO

ZIP CODE

63645

DESCRIPTION OF WELL AND LEASE

NAME OF LEASE

JAMES W. SMITH, ET AL

WELL NUMBER

20557 #3

ELEVATION (GROUND)

990

WELL LOCATION

235

FT. FROM (S) SEC. LINE

2405

FT. FROM (W) SEC. LINE

SECTION

22

TOWNSHIP

44N

RANGE

33W

COUNTY

CASS

NEAREST DISTANCE FROM PROPOSED LOCATION TO PROPERTY OR LEASE LINE *235* FEET

DISTANCE FROM PROPOSED LOCATION TO NEAREST DRILLING, COMPLETED OR APPLIED — FOR WELL ON THE SAME LEASE *1893* FEET

PROPOSED DEPTH

1020'

ROTARY OR CABLE TOOLS

ROTARY (AIR)

DRILLING CONTRACTOR, NAME AND ADDRESS

*PENSE BROS. DRG. CO., INC.
Box 551
FREDERICKTOWN, MO*

APPROX. DATE WORK WILL START

ON APPROVAL

NUMBER OF ACRES IN LEASE

NUMBER OF WELLS ON LEASE, INCLUDING THIS WELL, COMPLETED IN OR DRILLING TO THIS RESERVOIR *3*

NUMBER OF ABANDONED WELLS ON LEASE *1*

IF LEASE PURCHASED WITH ONE OR MORE WELLS DRILLED, FROM WHOM PURCHASED?

NAME *N/A*

ADDRESS

NO. OF WELLS: PRODUCING *2*
INJECTION *1*
INACTIVE *0*
(Plugged) ABANDONED *1*

STATUS OF BOND

☐ SINGLE WELL
AMOUNT \$

☒ BLANKET BOND
AMOUNT \$ *20,000.00*

☒ ON FILE
☐ ATTACHED

REMARKS: (IF THIS IS AN APPLICATION TO DEEPEN OR PLUG BACK, BRIEFLY DESCRIBE WORK TO BE DONE, GIVING PRESENT PRODUCING/INJECTION ZONE AND EXPECTED NEW INJECTION ZONE. USE BACK OF FORM IF NEEDED.)

*WORK DONE - LOGS - WATER ANALYSIS - OTHER PERTINENT
INFORMATION ACCOMPANIES APPLICATION.*

PROPOSED CASING PROGRAM

APPROVED CASING — TO BE FILLED IN BY STATE GEOLOGIST

AMOUNT	SIZE	WT/FT	AMT. OF CEM.	AMOUNT	SIZE	WT/FT	AMT. OF CEM.
<i>50'</i>	<i>7"</i>	<i>19 LB</i>	<i>TO SURF</i>	<i>50'</i>	<i>7"</i>	<i>19 lb</i>	<i>to surf.</i>
<i>1020'</i>	<i>4 1/2"</i>	<i>10.5 LB</i>	<i>TO SURF</i>	<i>1020</i>	<i>4 1/2"</i>	<i>10.5 lb</i>	<i>to surf.</i>

the undersigned, state that I am the *ASSISTANT VICE PRESIDENT* of the *PENSE BROS. DRG. CO., INC.* company), and that I am authorized by said company to make this report, and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct, and complete to the best of my knowledge.

SIGNATURE *B.E. Blaneett*
B.E. BLANCETT

DATE

7/22/93

WELL NUMBER

20557

APPROVED DATE

10/29/93

APPROVED BY

James H. Williams

- ☒ DRILLER'S LOG REQUIRED ☒ E-LOGS REQUIRED IF RUN
☒ CORE ANALYSIS REQUIRED IF RUN ☒ DRILL STEM TEST INFO. REQUIRED IF RUN
☐ SAMPLES REQUIRED
☒ SAMPLES NOT REQUIRED
☐ WATER SAMPLES REQUIRED AT

RECEIVED

NOTE ▶ THIS PERMIT NOT TRANSFERABLE TO ANY OTHER PERSON OR TO ANY OTHER AGENCY. APPROVAL OF THIS PERMIT BY THE OIL AND GAS COUNCIL DOES NOT CONSTITUTE ENDORSEMENT OF THE GEOLOGIC MERITS OF THE PROPOSED WELL NOR ENDORSEMENT OF THE QUALIFICATIONS OF THE PERMITTEE.

I _____ of the _____

Company confirm that an approved drilling permit has been obtained by the owner of this well. Council approval of this permit will be shown on this form by presence of a permit number and signature of authorized Council representative.

DRILLER'S SIGNATURE

DATE

PROPOSED OPERATIONS DATA

PROPOSED AVERAGE DAILY INJECTION,	PRESSURE <u>300</u> PSIG, RATE <u>5000</u> <u>(BPD)</u> GPM, VOLUME _____ BBL/GAL
APPROVED AVERAGE DAILY INJECTION, (TO BE FILLED IN BY STATE GEOLOGIST).	PRESSURE _____ PSIG, RATE _____ BPD/GPM, VOLUME _____ BBL/GAL
PROPOSED MAXIMUM DAILY INJECTION,	PRESSURE <u>600</u> PSIG, RATE <u>15,000</u> <u>(BPD)</u> GPM, VOLUME _____ BBL/GAL
APPROVED MAXIMUM DAILY INJECTION, (TO BE FILLED IN BY STATE GEOLOGIST).	PRESSURE <u>600</u> PSIG, RATE _____ BPD/GPM, VOLUME _____ BBL/GAL
ESTIMATED FRACTURE PRESSURE/GRADIENT OF INJECTION ZONE	PSI/FOOT _____

DESCRIBE THE SOURCE OF THE INJECTION FLUID

NOTE ► SUBMIT AN APPROPRIATE ANALYSIS OF THE INJECTION FLUID. (SUBMIT ON SEPARATE SHEET)

DESCRIBE THE COMPATIBILITY OF THE PROPOSED INJECTED FLUID WITH THAT OF THE RECEIVING FORMATIONS, INCLUDING TOTAL DISSOLVED SOLIDS COMPARISONS.

PENNSYLVANIAN COAL SEAM FLUID IS RUNNING APPROX. 12,000 + PPM OF TDS

PROPOSED KINDERHOOK WATER (INJECTION AREA) IS GREATER THAN 10,000 + PPM OF TDS

GIVE AN ACCURATE DESCRIPTION OF THE INJECTION ZONE INCLUDING LITHOLOGIC DESCRIPTIONS, GEOLOGIC NAME, THICKNESS, DEPTH, POROSITY, AND PERMEABILITY.

THE KINDERHOOK INTERVAL TO BE USED FOR DISPOSAL IS A DOLOMITE WITH 12% PRIMARY POROSITY & ADDITIONAL SECONDARY POROSITY.

THE ZONE OF DISPOSAL IS SHOWN FROM 890' TO 910' ON DENSITY LOG.

GIVE AN ACCURATE DESCRIPTION OF THE CONFINING ZONES INCLUDING LITHOLOGIC DESCRIPTION, GEOLOGIC NAME, THICKNESS, DEPTH, POROSITY, AND PERMEABILITY.

BETWEEN THE INJECTION INTERVAL & PRODUCING PENNSYLVANIAN FORMATIONS OF THE AREA, THERE IS APPROXIMATELY 200' OF DENSE LIMESTONE OF THE WARSAW FORMATION, WITH LITTLE OR NO POROSITY OR PERMEABILITY.

BELOW THE PERFORATED INTERVAL IS APPROX. 75' OF LIMESTONE WITH 12% POROSITY

SUBMIT ALL AVAILABLE LOGGING AND TESTING DATA ON THE WELL

GIVE A DETAILED DESCRIPTION OF ANY WELL NEEDING CORRECTIVE ACTION WHICH PENETRATES THE INJECTION ZONE IN THE AREA OF REVIEW (1/2 MILE RADIUS AROUND WELL). INCLUDE THE REASON FOR AND PROPOSED CORRECTIVE ACTION.

NO OTHER WELLS IN 1/2 MILE RADIUS PENETRATING

THE ZONE CONSIDERED FOR DISPOSAL &/OR INJECTION

RECEIVED

JUL 23 1993

07/23/93

12:58

816 261 4288

AECI-MINING DIV

004



MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI OIL AND GAS COUNCIL
INJECTION WELL LOCATION PLAT

FORM OGC-4-1

OWNER <u>PENSE BROTHERS DRILLING CO., INC.</u>		COUNTY <u>CASS</u>
LEASE NAME <u>J. W. SMITH, ET AL</u>		
<u>235</u> FEET FROM <u>S</u> SECTION LINE AND <u>2405</u> FEET FROM <u>W</u> SECTION LINE OF SEC. <u>22</u> , TWP. <u>44</u> N., RANGE <u>33</u>		

N

SCALE
1" =

NOTE: SEE ATTACHED DESCRIPTION

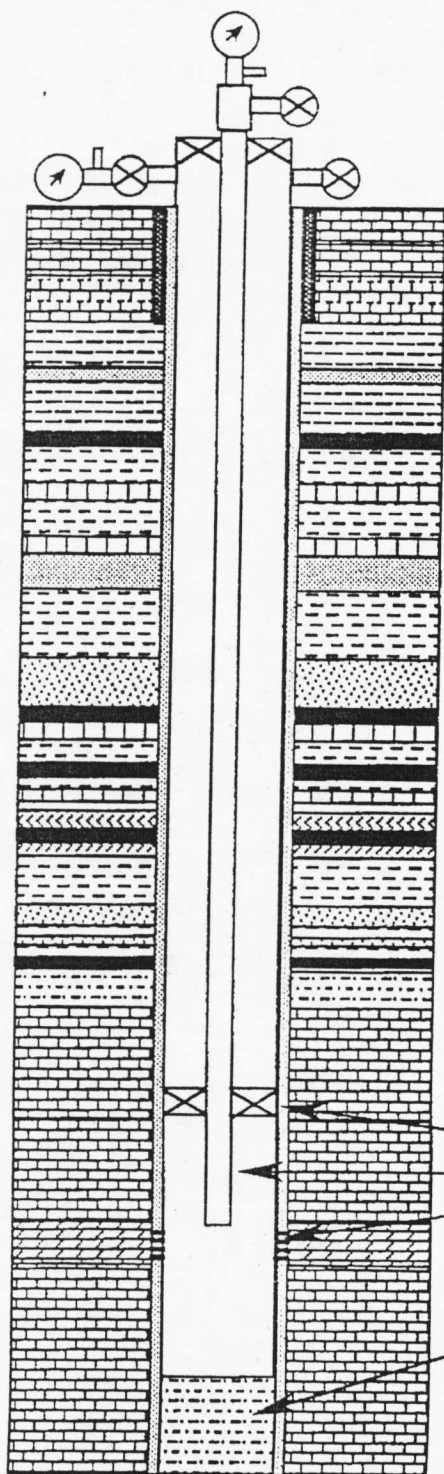
o

REMARKS <u>SURVEY DESCRIPTION ATTACHED</u> <u>NO WELLS WITHIN 1/2 MILE RADIUS AROUND SUBJECT WELL THAT</u> <u>PENETRATE THE PROPOSED INJECTION ZONE.</u>	
<p align="center">INSTRUCTIONS</p> <p>On the above plat, show distance of the proposed well from the two nearest section lines, the nearest lease line, and from the nearest well on the same lease completed in or drilling to the same reservoir. Do not confuse survey lines with lease lines. See rule 10 CSR 50-2.030 for survey requirements. Lease lines must be marked.</p>	<p>This is to Certify that I have executed a survey to accurately locate injection and area of review wells (wells within a 1/2 mile radius of the injection well that penetrate the injection interval) in accordance with 10 CSR 50-2.030 and that the results are correctly shown on the above plat.</p> <div style="text-align: right; margin-top: 20px;"> <p>RECEIVED</p> <p>JUL 23 1993 (SEAL)</p> </div>
<p align="center">REMIT TWO COPIES TO: MISSOURI OIL AND GAS COUNCIL P.O. BOX 250, ROLLA, MISSOURI 65401</p>	<p>REGISTERED LAND SURVEYOR</p> <p align="right">NUMBER</p> <p align="right" style="font-size: 1.2em;">MO Oil & Gas Council</p>



MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI OIL AND GAS COUNCIL
INJECTION WELL SCHEMATIC

COUNTY	PERMIT NUMBER	OPERATOR	WELL NUMBER
Cass		Pense Brothers	Smith #3



DENNIS
SWOPE
HERTH A

KNOBTOWN SS

MULBERRY

PAWNEE

FT. SCOTT

LAGONDA

SQUIRREL SS
WHEELER
ARDMORE
MINERAL

TEBO

BARTLESVILLE SS
ROWE

WARSAW

SPUD DATE: 12/30/92
LOG DATE: 1/6/93
CEMENTED W/ 129 sacks
circulated to surface: 1/6/93
CEMENT BOND LOG: 5/7/93

MODEL R PACKER AT 850'
2 3/8" TUBING TO 870' - J55
4 1/2" CASING SET @ 1012' - J55
KINDERHOOK (PERFORATED INTERVAL 890' - 910' DENSITY LOG 1-6-93)

TD 1020' 6 1/2" HOLE

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JUL 23 1993

INSTRUCTIONS ON THE ABOVE SPACE DRAW A NEAT, ACCURATE SCHEMATIC DIAGRAM OF THE APPLICANT INJECTION WELL INCLUDING THE FOLLOWING: CONFIGURATION OF WELL HEAD, TOTAL DEPTH OR PLUG BACK TOTAL DEPTH, DEPTH OF ALL INJECTION OR DISPOSAL INTERVALS, AND THEIR FORMATION NAMES, LITHOLOGY OF ALL FORMATIONS PENETRATED, DEPTHS OF THE TOPS AND BOTTOMS OF ALL CASING AND TUBING, SIZE AND GRADE OF ALL CASING AND TUBING, AND THE TYPE AND DEPTH OF PACKER, DEPTH, LOCATION, AND TYPE OF ALL CEMENT, DEPTH OF ALL PERFORATIONS AND SQUEEZE JOBS, AND GEOLOGIC NAME AND DEPTH TO BOTTOM OF ALL UNDERGROUND SOURCES OF DRINKING WATER WHICH MAY BE AFFECTED BY THE INJECTION. USE BACK IF ADDITIONAL SPACE IS NEEDED, OR ATTACH SHEET

SECTION 22, TOWNSHIP 44 NORTH, RANGE 33 WEST

CASS COUNTY, MISSOURI

NE Cor., SW 1/4, SW 1/4 22-44-33

IP

IP

NE Cor., SW 1/4, SE 1/4 22-44-33

N 46° 41' 52" W 1461.99'

N 56° 40' 54" E 1892.87'

CENTERLINE SECTION 22

235 +-'

S 43° 03' 45" W 1893.92'

Three Cornered Fence

IP

FOUND IP

S 73° 44' 41" W 1081.74'

Edward A. Cleaver, L.S. 1241

SE Cor., SE 1/4, SW 1/4 22-44-33

S 43° 03' 45" W 1893.92'

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JUL 23 1993

MO Oil & Gas Council

ORDER NO.: 2770

CLEAVER AND ASSOCIATES, P.R.2, BOX 42 ATLANTA, MO. 63530

I hereby certify the survey plotted hereon complies with the Current

Minimum Standards for Property Boundary Surveys adopted by the MISSOURI

DEPARTMENT OF NATURAL RESOURCES.

Executed this 24th day of Dec. 1992 by order of LEMCO.

*Edward A. Cleaver*SCALE 1" = 400'
SOUTH LINE 22-44-33
ASSUMED WEST-EASTWELL REFERENCE TIES IN THE SOUTH 1/2 22-44-33 CASS COUNTY, MO.
FOR: PENSE BROTHERS DRILLING CO. INC.
PROPOSED SMITH WELL #3

**ENGINEERING SURVEYS AND SERVICES
TESTING LABORATORY**

1113 Fay Street • Columbia, Missouri 65201 • (314) 449-2646

802 El Dorado Drive • Jefferson City, Missouri 65101 • (314) 636-3303

Date 21 October 1993

Lab No. 4082

Project: Smith #3

Location: Clifton Hill, Missouri

Date Received: 13 October 1993

Sample No./

Description: 7422 / Smith #3

TEST RESULTS

PARAMETER	METHOD	SAMPLE NUMBER	DETECTION LIMIT
pH, units	4500-H B	7422	6.2
Total Dissolved Solids, mg/l	2540 C	18,800	1

Note: Sample secured and delivered to lab by others.

RECEIVED
OCT 25 1993

MO Oil & Gas Council

CC: 1 Wells

ENGINEERING SURVEYS AND SERVICES
BY:

David A. Bennett
David A. Bennett, P.E.

APPLICATION FOR DETERMINATION OF THE MAXIMUM LAWFUL PRICE UNDER THE NATURAL GAS POLICY ACT (NGPA)

1.0 API well number: (If not assigned, leave blank. 14 digits.)	- - -				
2.0 Type of determination being sought: (Use the codes found on the front of this form.)	107 Section of NGPA		2 Category Code		
3.0 Depth of the deepest completion location: (Only needed if sections 103 or 107 in 2.0 above.)	_____ feet				
4.0 Name, address and code number of applicant: (35 letters per line maximum. If code number not available, leave blank.)	PENSE BROS. DRG. CO., INC Name 800 NEWBERRY ST., Box 551 Street FREDERICKTOWN MO 63645 City State Zip Code				
5.0 Location of this well: [Complete (a) or (b).] (a) For onshore wells (35 letters maximum for field name.)	Field Name CASS MO County State				
(b) For OCS wells:	Area Name _____ Block Number _____ Date of Lease: _____ Mo. Day Yr. OCS Lease Number _____				
(c) Name and identification number of this well: (35 letters and digits maximum.)	SMITH NO. 3				
(d) If code 4 or 5 in 2.0 above, name of the reservoir: (35 letters maximum.)	_____				
6.0 (a) Name and code number of the purchaser: (35 letters and digits maximum. If code number not available, leave blank.)	Name _____ Buyer Code _____				
(b) Date of the contract:	_____ Mo. Day Yr.				
(c) Estimated total annual production from the well:	_____ Million Cubic Feet				
		(a) Base Price	(b) Tax	(c) All Other Prices [Indicate (+) or (-).]	(d) Total of (a), (b) and (c)
7.0 Contract price: (As of filing date. Complete to 3 decimal places.)	S/MMBTU	_____	_____	_____	_____
8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.)	S/MMBTU	_____	_____	_____	_____
9.0 Person responsible for this application:	B. E. BLANCETT ASST. V. P. Name Title B. E. Blancett Signature 12/30/92 Date Application is Completed (314) 783-3347 Phone Number				

4 NOTIFICATION

MECHANICAL INTEGRITY TEST REPORT

Test Date: 12/29/93
Operator: LEPICO Operating Co
Contact Person: Dan Wells
Address: _____
Phone: _____

Lease Smith Well # 3
County Cass Permit # 20557

TEST INFORMATION:

Type MIT: Pressure X Radioactive Tracer Survey _____ Temperature Survey _____

	<u>Run #1</u>	<u>Run #2</u>	<u>Run #3</u>
Start Time:	<u>10:27</u>	_____	_____
End Time:	<u>10:37</u>	_____	_____

Length of Test: 10 minutes
(Start Time minus End Time)

Initial Pressure (PSI):	<u>650</u>	_____	_____
Ending Pressure (PSI):	<u>600</u>	_____	_____

Pressure Change: 50
(Initial Pressure minus Ending Pressure)

Fluid used for test (water, nitrogen, CO2, ect.): Water

Comments about test: New 4 1/2' packer put in well before test.
Surface leak in consolidated's piping accounts for pressure drop above.

The bottom of the tested zone is shut in with packer
at a depth of 980 ft. In signing the form below, it is certified
that the above indicated well was tested for mechanical integrity on the
date shown at the top of this page.

Signed: <u>[Signature]</u>	<u>Missouri AGENT</u>
Operator Contact Person or Approved Agent	Title

DO NOT WRITE BELOW THIS LINE

Results were: Satisfactory ✓ Not Satisfactory _____
State Agent: EKB Witnessed: Yes ✓ No _____

REMARKS: _____
Computer Update EK FILE WITH PERMIT!



associated electric cooperative, inc.

Thomas Hill Energy Center-Mining Division
Rt. 1, Box 110
Clifton Hill, Mo. 65244-9778
(816) 261-4287

SEP 07 1993

TELECOPY COVER PAGE

MO Oil & Gas Council

DATE: 9-7-93

TO: EVAN KIFER

COMPANY:

CITY:

TELEPHONE NUMBER:

FROM: Don Wells

TOTAL NUMBER OF PAGES (INCLUDING COVER SHEET): 2

SEP 07 1993

TELECOPIER NUMBER (816) 261-4288.

MO Oil & Gas Council

IF YOU DO NOT RECEIVE ALL PAGES CLEARLY, PLEASE CALL

(816) 261-4221 AND ASK FOR:

MESSAGE/SPECIAL INSTRUCTIONS: RESULTS FROM SMITH #3
DISPOSAL WELL. IF YOU HAVE ANY QUESTIONS
PLEASE CALL. (816) 261-4221 EXT 323

**ENGINEERING SURVEYS AND SERVICES
TESTING LABORATORY**

1113 Fay Street • Columbia, Missouri 65201 • (314) 449-2646

802 El Dorado Drive • Jefferson City, Missouri 65101 • (314) 636-3303

Date 01 September 1993Lab No. 4082Project: Smith #3Location: Clifton Hill, MissouriDate Received: 25 August 1993

Sample No./

Description: 6759 / Smith #3**TEST RESULTS**

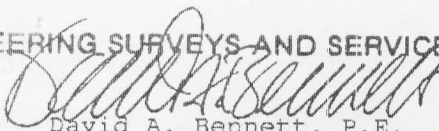
PARAMETER	METHOD	SAMPLE NUMBER	DETECTION LIMIT
pH, units	4500-H B	6759	
Total Dissolved Solids, mg/l	2540 C	6.1 23,100	1

Note: Sample secured and delivered to lab by others.

RECEIVED
SEP 07 1993

MO Oil & Gas Council

CC: 1 Wells

ENGINEERING SURVEYS AND SERVICES
BY:
David A. Bennett, P.E.

**ENGINEERING SURVEYS AND SERVICES
TESTING LABORATORY**

1113 Fay Street • Columbia, Missouri 65201 • (314) 449-2646

802 El Dorado Drive • Jefferson City, Missouri 65101 • (314) 636-3303

Date 19 July 1993Lab No. 4082Project: Smith #3Location: Clifton Hill, MissouriDate Received: 13 July 1993

Sample No./

Description: 6030 / Smith #3, 7/5/93**TEST RESULTS**

PARAMETER	SAMPLE NUMBER		DETECTION LIMIT
	METHOD	6030	
Total Dissolved Solids, mg/l	2540 C	1,930	1
pH, units	4500-H B	5.8	

Note: Sample secured and delivered to lab by others.

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JUL 23 1993

MO Oil & Gas Council

Method number from Standard Methods for the Examination of Water & Wastewater,
18th Edition, unless otherwise noted.CC: 1 WellsENGINEERING SURVEYS AND SERVICES
BY:*David A. Bennett*
David A. Bennett

COUNTY ROAD

8
40.00 AC

C. Hodges

5
00 AC

7
80.00 AC

Rowe

Rowe

6
80.00 AC

L. GUNNELS

mith

J. Smith

Smith #3

G. GUNNELS

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DEC 24 1992

MO Oil & Gas Council

MAP SHEET INDEX